PROPOSED

PERMIT APPLICATION REVIEW
TEMPORARY COVERED SOURCE PERMIT (CSP) NO. 0508-01-CT
Significant Modification Application No. 0508-04
Application for Renewal No. 0508-03
Application for Renewal No. 0508-02

Company: Laie Trucking Company, Ltd.

Mailing Address: P.O. Box 121
Hauula, Hawaii 96717

Facility: Crushing and Screening Plants

Location: Various Temporary Sites, State of Hawaii

SIC Code: 1442 (Construction Sand and Gravel)

Responsible Official: Michael Tangaro
Title: President
Company: Laie Trucking Company, Ltd.
Phone: (808) 293-8710

Proposed Project

Temporary CSP No. 0508-01-CT for operating the 638 TPH mobile jaw crushing plant was transferred from SAN Construction LLC to Laie Trucking Company, Ltd on March 4, 2014. A permit renewal application was submitted by SAN Construction LLC on November 10, 2011.

A permit significant modification application was submitted by Laie Trucking Company, Ltd on March 28, 2014. The significant modification includes the addition of a 200 TPH mobile screen with an insignificant 100 hp diesel engine.

Prior permits limited the crusher to operating 2,080 hrs/yr and 18 hrs/day maximum to ensure compliance with the twenty-four hour (24-hr) standard for PM10. The limits will be removed from the permit for the following reasons:

1. Emission levels are below BACT levels; and
2. The diesel engine generator is now deemed exempt.

The 150 TPH Cedarapids rock crusher operates using line power. The 638 TPH Extec crusher and 200 TPH American Ambassador screen operate using exempt diesel engine generators.

Equipment for existing Temporary NSP 0608-01-NT will be incorporated into Temporary CSP No. 0508-01-CT. Temporary NSP 0608-01-NT will be closed upon issuance of Temporary CSP No. 0508-01-CT.

Equipment:

a. 638 TPH "T" Series Extec Mega-Bite primary jaw crusher (28" x 44" jaw size), serial no. 6588S, manufacture date 2001;
b. Hopper (approximately 9' x 14');
c. Stepped vibrating grizzly feeder (approximately 4' x 13');
d. Main conveyor;
e. Hydraulic belt driven magnet;
f. Side conveyor;
g. Water spray system;
*h. 200 TPH American Ambassador mobile screen, model no. AMB 1, Serial no.8909-15, manufacture date 1989;
**i. 150 TPH Cedarapids rock crusher, Eljay Model 40, serial no. J-8240, with three (3) deck screen, manufacture date 1994.

* Equipment added as part of significant modification 0508-04.
** Equipment added from permit 0608-01-NT.

Applicable Requirements

Hawaii Administrative Rules (HAR)
Title 11 Chapter 59, Ambient Air Quality Standards
Title 11 Chapter 60.1, Air Pollution Control
- Subchapter 1, General Requirements
- Subchapter 2, General Prohibitions
  - 11-60.1-31, Applicability
  - 11-60.1-32, Visible Emissions
  - 11-60.1-33, Fugitive Dust
- Subchapter 5, Covered Sources
- Subchapter 6, Fees for Covered Sources, Noncovered Sources, and Agricultural Burning
  - 11-60.1-111, Definitions
  - 11-60.1-112, General Fee Provisions for Covered sources
  - 11-60.1-113, Application Fees for Covered sources
  - 11-60.1-114, Annual Fees for Covered sources
  - 11-60.1-115, Basis of Annual Fees for Covered Sources
- Subchapter 8, Standards of Performance for Stationary Sources
  - 11-60.1-161, New Source Performance Standards
- Subchapter 9, Hazardous Air Pollutant Sources
- Subchapter 10, Field Citations

Standard of Performance for New Stationary Sources (NSPS), 40 Code of Federal Regulations (CFR) Part 60
Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants is applicable to the crushing and screen plants because the maximum capacity of the Extec crusher is greater than 150 tons/hour, and the plants were manufactured after August 31, 1983.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61
This source is not subject to NESHAPs because there are no standards in 40 CFR Part 61 applicable to this facility.

Prevention of Significant Deterioration (PSD), 40 CFR Part 52, §52.21
This source is not subject to PSD requirements because it is not a major stationary source as defined in 40 CFR §52.21 and HAR, Title 11, Chapter 60.1, Subchapter 7.

Compliance Assurance Monitoring (CAM), 40 CFR 64
This source is not subject to CAM because the facility is not a major source. The purpose of CAM is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are 100% of the major source level; and (5) not otherwise be exempt from CAM.

Air Emissions Reporting Requirements (AERR), 40 CFR Part 51, Subpart A
AERR is not applicable because potential emissions from the facility do not exceed AERR thresholds.

DOH In-house Annual Emissions Reporting
The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding in-house reporting levels and for all covered sources. Annual emissions reporting will be required because this facility is a covered source.

Best Available Control Technology (BACT)
This source is not subject to BACT analysis because potential emissions are below significant levels. BACT analysis is required for new sources or modifications to sources that have the potential to emit or increase emissions above significant levels considering any limitations as defined in HAR §11-60.1-1.

Synthetic Minor Source
A synthetic minor source is a facility that is potentially major, as defined in HAR §11-60.1-1, but is made non-major through federally enforceable permit conditions. This facility is not a synthetic minor source because potential emissions do not exceed major source thresholds when the facility is operated for 8,760 hours/year.

INSIGNIFICANT ACTIVITIES / EXEMPTIONS

100 hp Cummins diesel engine, model no. 4BT39, serial no. 44400922, manufacture date 1989 is an insignificant activity in accordance with HAR §11-60.1-82(f)(2) because the heat input capacity is less than one (1) MMBtu/hr (5.82 gal/hr x 0.14 MMBtu/gal = 0.81 MMBtu/hr).

300 hp Deutz diesel engine powering the 638 TPH Extec crusher is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the crusher.

Emissions from the crushing plant and the insignificant activity combined are less than major source levels.

ALTERNATIVE OPERATING SCENARIOS

The applicant did not propose any alternate operating scenarios.

PROJECT EMISSIONS

Greenhouse Gas (GHG) Emissions
There are no GHG emissions because emissions from the crushing and screening plants are fugitive in nature.

Crushing and Screening Plants

The maximum capacities of the crusher and screen were used to calculate emissions. Water sprays will be used to control PM emissions. Emissions were based on controlled emission factors from AP-42 Section 11.19.2 (8/04) – Crushed Stone Processing and Pulverized Mineral Processing. Storage pile emissions were based on emission factors from AP-42 Section 8.19.1 4th addition (1985) – Sand and Gravel Processing Plants with a 70% control efficiency applied.

Crushing Plant and Screening Plants		
Pollutant	Crushing and Screening Operations Emissions (TPY)	Storage Pile Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	9.68	0.30
PM-10	3.75	0.14
PM-2.5	0.64	0.05

Vehicle Travel on Unpaved Roads

The maximum capacities of the crushers and screens were used to calculate emissions. A 70% control efficiency was assumed for water suppression to control fugitive dust. Emissions were based on emission factors from AP-42 Section 13.2.2 (11/06) – Unpaved Roads.

Vehicle Travel on Unpaved Roads	
Pollutant	Emissions (TPY) 8,760 hr/yr
PM	46.79
PM-10	11.44
PM-2.5	1.14

Total Emissions

Total facility emissions are summarized in the table below.

Total Facility Emissions and Trigger Levels (TPY)					
Pollutant	Emissions 8,760 hrs/yr (TPY)	BACT Significant Levels	AERR Thresholds	DOH Levels	Storage Pile and Vehicle Travel Emissions 8,760 hrs/day (TPY)
CO	0	100	1000	250	0
NO_X	0	40	100	25	0
SO_2	0	40	100	25	0
PM	9.68	25	-	25	47.09
PM-10	3.75	15	100	25	11.58
PM-2.5	0.64	10	100	-	1.19
VOC	0	40	100	25	0
HAPs	0	-	-	5	0

AIR QUALITY ASSESSMENT

An ambient air quality impact analysis (AAQIA) is not required for the proposed crushing and screening plants because the emissions are fugitive in nature. The Department of Health air modeling guidance generally does not require an ambient air quality impact analysis for fugitive emissions.

PROPOSED

Air Pollution Controls

1. The 638 TPH jaw crushing plant is equipped with a water spray system with water spray bars at discharge end of main conveyor and at jaw crusher.

2. The 150 TPH Cedarapids impact crusher is equipped with a water spray system.

3. A water spray truck is required to control fugitive dust at each work site for the crushing and screening operations.

4. The 200 TPH screening plant is not equipped with water spray bars, but will use carry over or wetting dry material prior to screening for control fugitive dust.

Significant Permit Conditions

40 CFR, Part 60, Subpart OOO provisions are applicable to the jaw crusher and conveyors built after 1983.

Reason: Incorporated into the permit based on applicability of federal standards.

Conclusion and Recommendation:

Actual emissions from this facility should be lower than estimated. Maximum potential emissions were based on worst-case conditions assuming maximum rated capacity of the crushing and screening plants. Actual crushing capacity will vary depending on product size and the type of material, but will likely be much lower than the maximum rated capacity. Calculations were based on 8,760 hours per year operation for the crushing and screening plants. The permit requires the use of a water spray system for compliance with the fugitive emission limits. The permit also requires the use of a water truck to control fugitive dust for plant operation. Recommend issuance of the temporary covered source permit renewal subject to the significant permit conditions, thirty-day (30-day) public comment period, and forty-five day (45-day) review by EPA.

Joseph Baumgartner, May 29, 2015